

ARKANSAS HIGHWAYS

The Official Magazine of the Arkansas
State Highway Department, Little Rock



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Vol. 4

MARCH · 1927

No. 3

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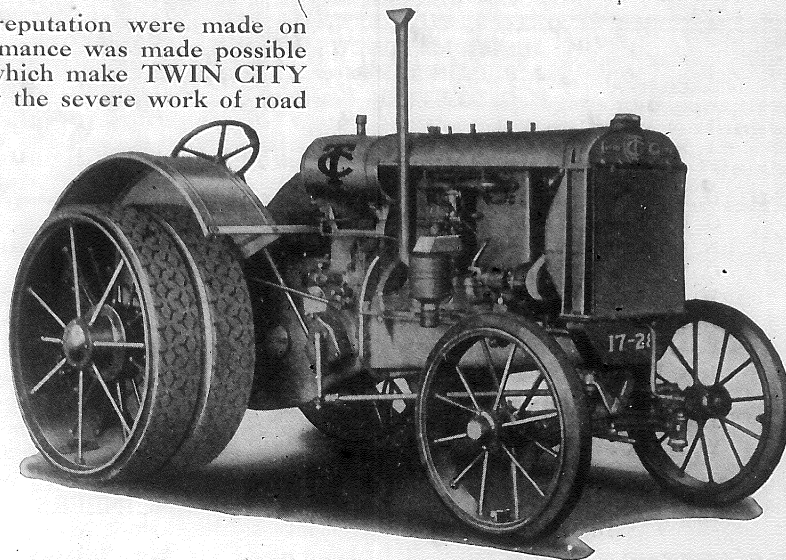
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Administration Highway Program Goes Over

Check Reveals That Only One Request Lost

Governor Martineau's highway program, an unknown quantity a week before the Legislature met, was enacted into law almost exactly as he desired it before the Forty-sixth General Assembly finished its work last Thursday.

A check-up of the many highway laws passed shows that the repeal of the gasoline tax refund was the only request of consequence which failed of passage. That was passed by the House, but defeated in the Senate.

Under the new laws, the State Highway Commission has authority to spend \$6,500,000 a year to pay all the bonds and interest of existing road districts; to spend \$13,000,000 a year for construction of new roads; to pay \$2,500,000 this year and \$2,750,000 next year for maintenance; to use \$250,000 immediately to repair damage by winter rains; to send back to the counties for use on county and community roads \$1,288,854.75 in 1927 and \$1,468,236.65 in 1928; to condemn and buy on behalf of the State any toll bridge now in existence; to construct toll bridges when it considers it advisable; issue bonds secured by the bridge, charge tolls sufficient to pay off the cost and make them free bridges; or to build the bridges out of construction funds.

In carrying out the new construction program, the commission has authority to employ outside engineers, not regularly on its staff, to buy road materials in large quantities and let contracts under which the contractors will use the State-owned materials; or to reject any and all bids and do construction work by force account if it thinks that course advisable, and has the approval of the governor.

The administration bill, H. B. 128, by Crawford and Purkins, is the backbone of the whole structure of road legislation. Its primary purpose was to pay off the bonds and interest now outstanding against the lands of the State, and to provide that the cost of building roads on the State highway system hereafter should be borne by motorists and not by the land owner.

Payment of the present bonds, increase of the maintenance appropriation and a turnback of \$1,288,854.75 in 1927—the amount received by counties in 1926 for county highway improvement—takes up practically all the current revenue. In order to finance a new construction program, based on expenditure of \$2 in new

roads for every \$1 paid on old bonds, the law authorizes the sale of State highway notes, secured by the future revenues from gasoline taxes and automobile license fees. The note issue is limited to \$13,000,000 a year, and the construction program must total at least \$13,000,000 a year.

The original bill carried no restrictions on the price of these notes, and put the duty of selling them on the Governor, Secretary of State, Auditor of State, State Treasurer and State Highway Commissioner. Supplemental bills passed later put a limit on the price of the value of par at five per cent, plus accrued interest, and changed the board so that it is now composed of the governor, John E. Martineau; the lieutenant governor, Harvey Parnell; the speaker of the House, Reece A. Caudle, one senator, Creed Caldwell; and one representative, John Nance, named by the lieutenant governor and speaker, respectively; the State Highway Commission chairman, Dwight H. Blackwood, and the four members of the commission, Justin Matthews, J. S. Parks, J. L. Williams and Sam J. Wilson; and former Governor Thos. C. McRae, appointed by Governor Martineau.

The bill as originally passed provided that all work must be done by contract. That provision was later changed by H. B. 337 by Oliver to provide that the Commission could, with the approval of the Governor, reject all bids and do the work itself. This change was made to prevent a possible combination of contractors to hold prices up.

Another supplemental bill, H. B. 446 by Nance, gave the Commission authority to buy materials in large quantities and require contractors to use them.

ROAD MEASURE SIGNED

The general bill and these supplemental measures have been signed by the governor, and each carried the emergency clause.

The gasoline tax was raised from four to five cents a gallon, and the motor oil tax of 10 cents a gallon was repealed by H. B. 437 by Caudle, which passed both Houses and is waiting the governor's signature. The House passed H. B. 439 by Caudle to repeal the provision for a refund of the gasoline tax on gasoline used

for agricultural and industrial purposes, but the Senate postponed that measure indefinitely. In its place the Senate and House passed S. B. 389 by the Highway Committee to tighten restrictions on gasoline tax refunds, provide for publication of claims in newspapers, and inflicting heavy penalties for false affidavits.

A general toll bridge bill, S. B. 395 by Raney, requested by the Highway Commission, was passed by both houses and has been signed by the governor. The commission has authority under the general highway bill to contribute to the cost or bear the entire cost of bridges on the State highway system. The Raney bill gives it authority to construct toll bridges on the system where it considers them advisable, because of excessive cost; to issue bonds to obtain funds and secure the bonds by a mortgage on the bridge and its approaches; to fix a rate of tolls for use of the bridge sufficient to pay off its cost in a term of years, and then to make it a free bridge, and part of the State highway system.

Another general toll bridge measure, S. B. 217 by Gentry, gives the Highway Commission authority under the right of eminent domain, to condemn any privately owned toll bridge in the State and pay for it on the basis of actual cost, plus reasonable organization and finance charges, less depreciation.

Several bills were passed authorizing specific toll bridges on the plan of the general toll bridge bill. These are to be located on the Arkansas river between Arkansas and Desha counties; on the Red river at Garland; on the White river; on the Ouachita river between Union and Bradley counties near Calion; and on the Arkansas river between Faulkner and Perry counties. The bills providing for the last two mentioned bridges are still awaiting signatures of the governor.

Another bill, S. B. 472 by Jimmerson, which would have required the commission to pay the bonds outstanding on other bridges was defeated in the House by a vote of 29 to 54 late in the session. It would have declared that all bridges on the State highway system, except privately owned toll bridges, bridges in cities of 25,000 or more people, or between cities with a combined population of 35,000 or more, should be considered part of the highway and be paid for under the provisions of Act No. 11 for payment of outstanding bonds of road districts.

Half of the cost of State highways through cities and towns is put upon the State Highway Commission in S. B. 388 by Hutto, which passed both Houses and is awaiting the governor's action. It provides that the Highway Commission shall designate the streets in any city through which the State highways pass, which shall be considered continuations of the State highways; that when any improvement district is organized to improve such streets, the commissioners of the district shall notify the Highway Commission, and two commissions jointly shall prepare plans and pay the cost half and half of the improvement. The commission is empowered under the general law to build roads through towns of less than 2,500.

Under S. B. 416 by Chalmers, the commission is given general authority to regulate traffic, both of motor vehicles and pedestrians on the State highways. Under the uniform traffic regulation act, H. B. 235, which is in effect in many States, it is given the same general authority. Under S. B. 233 it is empowered to require railroads to pave their crossings with the same material as used on the highway approaching the railroad.

In view of the heavy duties falling on the chairman of the Highway Commission under the new laws, the Legislature passed H. B. 413 by Purkins, which raises the salary of the elected State Highway Commissioner, Dwight H. Blackwood, to \$5,000 a year. The four appointive members of the commission serve without pay, except actual expenses.

The assets of road improvement districts which are relieved of the payment of their bonds by Act No. 11, are disposed of in H. B. No. 407 by Strait and Oliver. Generally, it provides that districts in which all the roads built by bonds are on the highway system, shall pay over immediately all their assets to the trustees for their bond holders, reducing the State's obligation by that amount; that districts with more than half their mileage on the State highway system shall pay half their assets on bonds and retain the other half for maintenance of off-system roads; that districts with more than half the mileage off the State system shall retain all their assets for maintenance and completion of their work. Commissioners of the latter districts are authorized to levy an annual tax not to exceed one per cent of the assessed benefits for maintenance. Provision is made for collection of delinquent taxes, payment of defaulted bonds by new assessments, if necessary, and distribution of any surplus of these assessments back to those who paid it.

Road districts which are in default their defaulted bonds, spread out the payments over a period of years, and thus avoid the heavy tax which would be necessary if all delinquencies were collected in one year. The bill was drawn with the Howard-Sevier road district in mind, but is applicable to any other in similar circumstances.

Road districts off the highway system which were formed but had not started work when the Harrelson act was adopted, are given a chance to revive under H. B. 417 by Caudle.

Some of these districts are in Pope county. The Harrelson act provided that no road district could build a road unless at least 50 per cent of its cost was borne by the State and Federal aid. Under Act No. 11, no part of State funds can be used for off-system road construction. These districts were thus estopped from proceeding by the Harrelson act and were still estopped by Act No. 11. H. B. 417 permits them to proceed with their work, provided a petition signed by a majority in value of the land owners is filed with the county court. The cost is to be borne entirely by the land in the districts.

Several bills were passed affecting traffic regulation. H. B. 25, by Cobb, prohibits the sale or use of cutouts on the public highways or streets. H. B. 69, by Plank, exempts drivers of farm trucks from paying chauffeur's license, and extends visiting privileges to trucks from other States coming to Arkansas to buy farm products or merchandise.

S. B. 410, by Chalmers, authorizes the leasing, maintenance and operation of viaducts, designed to keep the Harahan viaduct in operation while the new one is being built.

Several highway measures which were introduced and urged for passage were turned down by the Legislature, but they were not sponsored by the Highway Commission. Among them was S. B. 92, by Chalmers, providing for a permanent patented license tag, carrying a certificate of title. It was passed in the Senate, but de-

feated in the House. Another was Niven's H. B. 71, providing for drivers' licenses at \$1 a year each. Still another was Van Winkle's H. B. 180, to exempt rural mail carriers from the gasoline tax, which the House defeated. H. B. 507, by Mills, to amend the license law as to motorcycles, was tabled in the House.

H. B. 160, by Hall of Logan, providing for a highway commission of eight members, was defeated in the House. Governor Martineau had advocated a larger commission in his inaugural address, but later withdrew his support from the measure.

S. B. 226, by Senator Raney, which would have raised the gas tax to five cents cut the automobile license fee by \$2, was defeated in the Senate by a vote of 4 to 16.

SECONDARY ROAD PLAN

The two houses of the Legislature approved a novel plan for using county road revenue to build permanent roads. It has not been signed by the governor. H. B. 498, by Jones of Pulaski, embodying a plan sponsored by the Little Rock Engineers' Club, provides that the county treasurer of Pulaski county shall set aside half of the road revenue of the county, including the county's turn-back from the State, in a special fund to pave rural roads; that the county judge shall designate twice a year the secondary county roads, which must be between 50 and 75 miles total, and unpaved. Whenever the property owners form an improvement district to pave those roads or any part of them with asphalt, brick or concrete, the county judge is required to pay 75 cents to \$1.25 a yard aid out of the special fund. When any part of the road system is paved, it automatically drops, and another road is to be substituted. If the fund is not all used for aid to these roads at the end of the year, the county judge may allot 37 1-2 cents to 62 1-2 cents a yard to other paved road projects off the highway system.

The Legislature gave no directions to the county judges of the State as to expenditure of the \$2,757,091.40 which they will receive during the years 1927 and 1928 for use on their county and community roads. By the terms of Act No. 11 they are relieved of using any of it on the State highways in order to get them built. The new construction money takes care of that. They can use all of it on county and community roads, and the way they use it doubtless will be a factor in determining whether the 1929 Legislature will send it back to them thereafter.

Amended Version

Show me a paved road home,
I'm tired and I want to go to bed.
I just drove to town 'bout an hour ago,
In mud clear to my head.

Everywhere I roam,
Through sand and mud and loam,
You'll always hear me singing this song,
Build me a paved road home.

—*Nation's Highways.*

A German scientist says that people will soon be able to read their newspapers, then soak them in acids which will bring out the food value of the wood-pulp, and eat them for breakfast. The Literary Digest is already on sale at most drug stores.—*Brunswick (Ga.) Pilot.*

NATIONAL FORESTS GET \$7,500,000 ROAD APPROPRIATION

Apportionment of the \$7,500,000 road fund for the national forests among the States for the fiscal year of 1928, has been announced by the Forest Service, United States Department of Agriculture. The fund is part of the Federal aid road bill.

Four million five hundred thousand dollars was authorized by Congress for the forest highway fund, which provides for the survey, construction, and maintenance of forest roads of primary importance to States and communities; and \$3,000,000 was apportioned to the development of roads in and adjoining the national forests of primary importance for the protection, administration, and utilization of the national forests, and necessary for the use and development of the resources upon which communities within the national forests are dependent.

Because of the more extensive areas of national forest land in the West than in the East, the greater portion of the funds has been allotted to Western States. From the highway fund California was apportioned \$680,140; Idaho, \$509,561; Oregon, \$579,801; and Montana, \$403,447; Arkansas with \$34,472, and Virginia with \$17,287, and New Hampshire with \$16,437 received the bulk of the appropriation in the Eastern States. Alaska was allotted \$472,547, and Porto Rico \$597. Of the funds for forest road development Idaho was apportioned \$636,277; Oregon, \$537,103, and California \$423,834. New Hampshire with \$13,821 was given the great allotment in the Eastern States. In the South Arkansas received \$50,464 and North Carolina \$34,742. Alaska will get \$20,562 and Porto Rico \$306.

STATE	Forest Highway Fund Apportionment of \$4,500,000 Authorized	Forest Road-Development Fund Apportionment of \$3,000,000 Authorized
Alabama	\$ 3,954	\$ 6,979
Alaska	472,547	20,562
Arizona	279,246	135,777
Arkansas	34,472	50,464
California	680,140	423,834
Colorado	335,131	145,576
Florida	12,071	23,491
Georgia	11,648	21,997
Idaho	509,561	636,277
Illinois	390	206
Kentucky	1,608	1,832
Maine	352	-----
Maryland	353	-----
Michigan	2,383	11,430
Minnesota	29,302	34,889
Montana	403,447	288,252
Nebraska	4,661	1,193
Nevada	96,603	4,499
New Hampshire	16,437	13,821
New Jersey	837	411
New Mexico	210,424	116,239
New York	705	514
North Carolina	14,098	34,742
Oklahoma	2,109	359
Oregon	579,801	537,103
Pennsylvania	5,492	9,162
Porto Rico	597	306
South Carolina	2,199	5,194
South Dakota	35,263	19,224
Tennessee	11,677	15,919
Utah	172,562	48,128
Virginia	17,287	28,560
Washington	325,485	277,595
West Virginia	5,311	18,817
Wyoming	220,928	65,444
Grand Total	\$4,500,000	\$3,000,000

Road Surveys Made in Many Parts of the State

Crews Also Organized for Intensive Maintenance Work

Surveys have been started, or will be this month, in every one of the 12 unbonded counties of Arkansas for new road construction under the terms of Act No. 11, the new highway law, according to O. L. Hemphill, State Highway Engineer.

In addition at least a dozen construction projects started before Act No. 11 was passed, are under way in various parts of the State.

Redoubled maintenance work, authorized by the new appropriation of \$2,500,000 for this year, available March 1, has been delayed by excessive rains, but engineers in the various districts are getting their crews organized to give the roads intensive maintenance whenever weather permits work.

Surveying crews are working in nine of the 12 unbonded counties, preparing for new construction work, and crews will be sent into the other three this month.

In Crawford county, a survey party is working from Alma north toward Mountainberg, with the ultimate purpose of laying pavement on the first four miles north of Alma on U. S. No. 71. When this survey is completed, the party will investigate the road from Mountainberg north to Winslow, with a view to reducing grades and laying pavement there. South of Mountainberg an effort will be made to find a new location on Mountainberg mountain, where the road now contains a number of hairpin turns. Meantime work is proceeding on the grading and structures of the Alma-Mulberry road, where a pavement is to be laid as soon as practicable.

In Scott county, a survey has been started for completion of the drainage structures on the Mansfield-Waldron, and Waldron-Mena sections. It is planned to complete the structures and grading as soon as possible. Plans for surfacing are not completed.

In Union county two construction jobs are now under way, from Strong to Huttig and from El Dorado west. A survey is being made for a road from El Dorado to Smackover, which will be pavement.

In Ouachita county, a construction job between Buena Vista and Stephens is practically completed. A survey is under way for a road between Camden and Smackover.

In Calhoun county, grading and structures are now being put in between Hampton and the county line to the west, while a survey is being made from Hampton to Thornton.

In Pike, a survey is being made on U. S. No. 70 from Kirby to the county line west of Kirby.

In Sebastian, a survey is being made for possible change of location from Fort Smith to Greenwood, looking to a pavement on that 18-mile section.

A survey is under way in Hot Spring county from Donaldson south to the county line on U. S. No. 67. The same party will then survey State Highway No. 7 on the Arkadelphia-Hot Springs road.

In Cleburne county, a survey party is now working from Heber Springs northwest on No. 16 through Miller and Edgemont, toward Shirley. Surface probably will be put on No. 16 from Heber Springs toward Searcy, and drainage structures will be built on No. 25 from Heber Springs to Quitman.

A survey party will be sent into Marion county this month to work on No. 14 from Yellville southeast, surveying for grading and structures. Grading has been started near Yellville.

A survey will start next week in Clay county from Corning southwest on No. 67 for grading and structures. Some of this road is already graded.

Construction projects now under way in the State include:

Grading and structures in Jackson county between Tuckerman and Alicia on No. 67.

Construction on State Highway No. 3 in St. Francis county from Hughes southwest to the county line.

Construction of bridge over St. Francis river in Lee county will start this month.

White river bridge in Independence county under construction.

Bridge over St. Francis east of Paragould under construction in Greene county.

Bridge being built over Point Remove creek in Conway county on U. S. No. 64.

Road from McGehee to Watson under construction.

Bridge over Caney Creek northeast of Glenwood in Pike county near completion.

Bridge over Ouachita river west of Mount Ida in Montgomery county nearly finished.

KENTUCKY HIGHWAY DEPARTMENT ISSUES BEAUTIFUL ROAD MAP

The State Highway Department at Frankfort has just off the press ten thousand copies of its new 1927 State road map and tourist guide. It is double the size of the folder published and distributed by the Highway Department last year, being twenty-four folder pages on one side, filled with distance tables, logs of principal routes, road rules and regulations, data as to points of interest, Kentucky resources, etc.

On the reverse side is a Kentucky map thirty-two by fifteen inches, the base in light blue and the roads in red. The map, a work of art, has under it an elaborate index showing the location of the principal cities, towns and points of interest in all the counties of the State. As an advertisement of Kentucky, nothing recently published is of greater value. As an attractive piece of work from the printer's and writer's point of view, and as a comprehensive aid to home and visiting tourist it is unsurpassed in excellence by anything we have seen from any other State in the Union. Through intelligent co-operation between the department's drafting and publications rooms with the State printer, it is claimed, that the work was done for less than one-half, if not less than one-third, of what it would have cost in any commercial house in the country. In lots of less than four copies, the map is free to the traveling public, upon request. For four or more copies up to one hundred, the rate is four cents each.

CHILD'S PLAY

Mr. Juggs—"Have the Benders been married long?"

Mrs. Juggs—"No, I don't believe so; they're still keeping a budget."

Secretary Jardine Urges Completion of Interstate Routes

Secretary of Agriculture Wm. M. Jardine, in his recent comprehensive address at Pinehurst, North Carolina, before the annual meeting of the American Association of State Highway Officials, placed before the road builders of America a definite goal—completion of the initial improvement of the primary system of transcontinental highways by 1930. This definite object, he asserted, is possible of accomplishment and by it both the Federal and State governments will have kept faith with those who provide funds for highway building.

To establish the 80,000 miles of important interstate routes in the public mind as an entity, the secretary urged as essential the consummation of plans for their uniform signing and numbering as already recommended by the joint board of State and Federal engineers.

WHAT FEDERAL AID HAS DONE

The remarkable improvement in roads during the last ten years and the increase in highway transportation, the secretary pointed out, has been the greatest in the history of the country. Coincidentally this same decade covers the period of Federal aid road legislation and its administration under the Department of Agriculture. In 1916 there were less than 2,500,000 motor vehicles in the country, of which only 73,000 were registered as motor trucks. Today the registration is in excess of 20,000,000 and commercial vehicles alone are in excess of the total registration of ten years ago.

The decade also has witnessed the organization of efficient highway departments in all of the States; research and experimentation have made important contributions to engineering science and have resulted in increased service from highways at a lower cost; equipment has been made more efficient and numerous new devices have added to the speed of construction.

STAGE CONSTRUCTION APPROVED.

Stage construction of highways, which is the policy being followed in California, was heartily approved by the secretary in the following words:

"The problem of the present is to serve as adequately as possible the present needs, keeping in mind at the same time the greater needs of the future, and making suitable provision for their accommodation when the time arrives. This is the policy of stage construction, a sound policy because it recognizes the utter impossibility of building once for all a system of highways which may be regarded as a finished product, but rather substitutes for that conception the principle of progressive improvement.

"The construction of earth roads on the lines and grades and with the drainage provisions that will be required by the pavement of the future is a recognized application of the state-construction principle. But it has much wider applications than that. The acquisition of rights of way of *ample width* for the future so that, when the need arises, it will be possible without heavy expense or the injury of private property to effect the necessary improvements, is another highly important application. The same foresighted policy suggests the location of the improved highways in relation to railroads at crossings in such manner as to provide satisfactorily for separation of grades, and it applies also to provisions

for the construction of future by-pass highways around cities, and for the diversion of traffic from routes of growing congestion.

"To anticipate thus the needs of the future implies a knowledge of the probable traffic importance of the various roads which can only be obtained by a careful and detailed study of the present distribution and the factors inherent in the economic and physical characteristics of the State.

"The highway department that has in its possession such information as these surveys supply can really plan for the future. It has substituted facts for opinions; it knows the present and probable future importance of its roads; it knows the density and also the weight of the traffic to which each road is now subjected and to which it is likely to be subjected in the near future. It can, therefore, devise a reasonable program of construction extending into the future, it can budget its funds intelligently; it can determine the order in which the various highways should be improved and give a satisfactory answer to those who favor priority for other roads; and it has in its possession an adequate basis for the necessary decision as to the character of improvement required for each road.

"This is sound and businesslike administration of highway improvements. It is the reverse of the casual and haphazard procedure which too often has subjected the business of highway improvement to political manipulation, and produced discontinuous, unbalanced, and uneconomical development instead of well articulated systems of improved highways."

IMPORTANCE OF MAINTENANCE

Discussing the important subject of maintenance, the secretary said:

"Looking to the future also there must be a still greater improvement in the maintenance of all roads and especially of the Federal-aid roads, an obligation which the Federal law places upon the State highway departments. While unquestionably there has been great improvement in this respect during the last decade, the failure to make proper provisions for the repair of roads upon which large sums of public money have been invested is the sheerest of economic folly. Unless there is positive assurance that means will be available for the constant and continuous care of the roads after they are improved, I am convinced that it would be better not to improve them at all.

"While the States in accepting the Federal appropriations accepted also the obligation of keeping the roads in proper repair, the deeper obligation is that of rendering the best possible service to the public and of protecting public investment."

PRIMARY SYSTEM NEARING COMPLETION

Secretary Jardine sees a great system of national highways taking form as a result of Federal and State cooperation. Coming to the closing paragraphs of his address, he held up before the assembled highway officials the vision of those who, in 1916, worked for the passage of the first Federal-aid law. Discussing the completion of the primary system of Federal-aid routes, he said:

"With each year's progress now it becomes easier to see the working out of one of the primary conceptions

of the Federal-aid road legislation as expressed in the requirement to expedite the completion of an adequate system of highways interstate in character. It was foreseen that the fulfillment of this purpose would come through a linking up of sections of main highways as they are developed State by State, and up to this time the programs within the States have in general been in harmony with the expected progress in the direction of through routes. In some cases the department has taken definite positions with reference to specific projects to provide missing links, usually in the way of bridges at State boundaries, but now with the major routes of the country so clearly defined by the action of the States through this association, the unimproved sections of these routes have been brought in strong relief.

"There may be critics who hold that the ten-year period covered by this legislation should have produced more transcontinental routes fully improved.

"There are two answers: The actual operations of the Federal highways legislation did not get under way until well into the year 1919, and the tremendous development of motor vehicular traffic, particularly around every center of population, large and small, local rather than transstate in character, has necessitated first, attention to the immediate service demanded. It is my feeling that the progress in the completion of transcontinental roads is gratifying, but I do not lose sight of the fact that the lack of transstate routes in the agricultural States of the Mississippi Valley is not in keeping with the development, east and west. In specific States this condition is brought about more largely by dependence upon county financing (which the secretary did not approve) than upon any lack of need of such roads or lack of response on the part of the State highway departments.

"Now that there has been plainly pointed out and defined the through routes which are of major national importance, there should be an energetic effort made to improve the missing links, not because they are transcontinental routes but rather because in general these unimproved sections are on the most important State routes, and the failure to improve these imposes a handicap upon the people of each State in the satisfactory use of their own road systems. But the national use must not be lost sight of, nor the requirement of the national legislation that these interstate routes shall be expedited.

"The department has not attempted to dictate the routes which should be regarded as major State routes. Neither for that matter have the State highway departments. Through the careful work of the Joint Boards of Interstate Highways, and the executive committee of the association, each State highway department has expressed in a definite way the routes which are of the greatest importance within the State. In other words, this system of interstate routes has been built from the local viewpoint upward and not from the transcontinental viewpoint downward.

"But having now settled upon these routes, which is the last analysis the public itself has defined by their use, it becomes our duty, the Federal and State highway departments working in co-operation to expedite their completion. There are approximately 80,000 miles of highway included in these routes. To complete them to a state of improvement satisfactory for present use is a matter of closing gaps. I am convinced that this, the initial improvement, can be completed by 1930 without difficulty, and as a definite objective I can think of no

expenditure of effort which would bring with it a greater return of public satisfaction or any more intelligent method of keeping faith with both the Federal and State governments which have entrusted to us the administration of these large funds.

"From the Federal point of view the early improvement of these routes is of large importance, and I ask your full support in an effort to complete the unimproved links at the earliest possible time and to bear with this department in a reasonable but insistent demand that the Federal funds so far as possible be dedicated to this purpose with the full consent and belief on the part of the highway departments that the end is desirable and worthy."

The Futurist Engineer

By Nelson G. Tayman, Engineer, Plans and Surveys

Engineering like art reaches a certain period, halts to give the critic food for thought, feels the urge of the sophist and then proceeds to declare a modernity, leaving to posterity the milestones of achievement, futile effort and stumbling, milestones that guide them past the shoals of the ancients.

The time has come in the construction of our highways when the engineer has to be seer as well as engineer and visualize what will happen on our highways in the next twenty-five or fifty years; the time is here when we must use our highways to divert the human tide and people, our now silent spaces with cities.

The following in the writer's estimation are few of the problems that can be solved to expedite the above. Our right-of-way should be one hundred feet or more. Our types of pavement should be so constructed that it could be widened to any width without hazard to that already constructed.

Due to the increased traffic from year to year, our highways should be built on more tangent and eliminate the curvature as much as possible, reducing the hazard. We should allow five hundred feet offset from railroads to eliminate possible grade crossings. As I stated before highway improvement breeds expansion and factories, etc., arise over night so to speak with the advent of a new highway.

The location of our roads should be well out of the capillary tract, minimizing the possible erosion and undulation of our subgrades under the slab.

Now is the time for us to study our drainage problems. Experience has been costly. Adequate structures should be constructed to take care of the above. We should make drainage a study relative to our highway problems, channel changes, flood levels, etc., should be considered to both minimize the number of structures and make our structures large enough.

Careful control should be used in the selection of pavement types. Real engineering should be enacted on this item, counting the cost of experience and real study should be done to find out the real cause of pavement failures.

The time has come when barriers such as follows, should be burned away: County lines, boundaries, petty politics and Uncle Harry and Cousin Pete's road. We have made these mistakes—let's profit by them and use our highways to make our State second to none.

Legislation For Pedestrians

(From the Literary Digest)

One problem created by the automobile's growing toll of life "concerns the ability of motorists causing these accidents to render adequate financial recompense to the victims or their families," for "many of the half million persons injured last year were forced to meet hospital, surgical and medical bills toward which expensses the person who injured them contributed nothing." And this situation prompts Clark Belden to present in the Elks Magazine, under the title "A New Responsibility for Motorists," a review of several factors which have combined, he says, to emphasize "the growing importance of the motorist's financial responsibility—or lack of it." In the first place:

Automobile accidents recently took their place as the leading cause of accidental fatalities. With 20,000,000 automobiles and several times that number of pedestrians forced to use one common spot—our streets and highways—at the same time for many hours each day, this is hardly surprising. Few persons will be startled at the statement of Hon. Robert S. Marx, Judge of the Superior Court of Cincinnati, that today "three-fourths of all civil jury trials are concerned with personal injury claims largely arising from automobile accidents."

The property-owning motorist usually carries automobile liability and property damage insurance to protect himself from the results of personal injury suits. The more property he has the more insurance he usually carries. The self-preservation instinct—the common sense of holding on to what you have—urges this course. The size and frequency of the automobile liability damage verdicts awarded by juries in recent years has encouraged this tendency. Verdicts of \$10,000 or \$15,000 and higher are awarded so frequently today that often they no longer "make" the front page of the newspapers. Nor is it necessary to kill a person for a jury to award such a verdict. Broken arms, legs or ribs alone are often valued as high as that by juries.

The less property a motorist owns the less he is inclined to carry insurance—unless he be the type of individual who visualizes clearly and takes seriously his responsibility to his potential victim. Many persons lacking property, however, do not project their thinking beyond themselves. Some assetless motorists do not fear a \$15,000 injury suit in the slightest. Legally, they have little cause to fear one. Their attitude would be apt to be, in the language of the street: "Try and get it!"

Such a situation, says Mr. Belden, suggests the desirability of legislation to protect potential victims of automobile accidents—pedestrians. Of attempts to bring about such legislation, he gives us facts from which it is plain that the problem is exercising many minds. Thus:

During 1924 and 1925, the Legislatures of thirty-eight States considered bills aimed to assure every victim of an automobile accident, or his family, financial remuneration regardless of the financial status of the automobile owner at fault. These bills have called for compulsory insurance.

A contention of compulsory insurance advocates is that the cost of insurance to any one motorist under this plan would not attain a burdensome figure because it

would be spread among all the motorists of a given State in equal proportion.

Many persons believe that compulsory insurance will reduce accidents.

It is fair to spread the cost of compulsory insurance among all motorists, according to its advocates, because it is impossible to forecast which particular motorist will have an accident and which will not.

Those who oppose the compulsory insurance idea state that it is unjust in principle, because it compels motorists who are careful and who do not have accidents to pay for the damage done by reckless motorists.

It is also maintained that compulsory insurance disregards the fact brought out by the Hoover Conference on Street and Highways Safety that only 5 per cent of the insured drivers have accidents during one year, or that the average driver has but one accident in twenty years. And that it is possible to discover the identity of this small and reckless minority.

The plan of the compulsory payment of annual insurance premiums by motorists has also been questioned in the light of its possible unconstitutionality. Some opponents maintain that it is contrary to the spirit of the Constitution to tax certain citizens who are free of blame for the payment of damages for which other citizens are directly and solely responsible.

Another contention is that compulsory insurance would increase rather than decrease accidents because it would give persons lacking a sense of responsibility an undue sense of security, so that they would be apt to "lean" on the protection it afforded and "run wild."

The opponents of compulsory insurance, we are further reminded, call attention to the fact that pedestrians are to blame for many accidents and that the whole responsibility cannot fairly be placed upon the shoulders of motorists. They set forth the following data:

A two-year survey of automobile accidents in the District of Columbia from July 1, 1923, to August 31, 1925, indicated that in 21.6 per cent of the cases the pedestrian was to blame. In Connecticut during 1923, 43 per cent of the fatal accidents and 50 per cent of the serious personal injury accidents were the fault of persons other than the operators of the cars. The National Bureau of Casualty and Surety Underwriters summarized the cause of 21,120 accidents for the Hoover Conference and reported that 28.3 per cent were the fault of the pedestrians. The Insurance Committee of the Hoover Conference found that in 32.7 per cent of motor accidents a reckless driver was responsible; that in 29.3 per cent, a reckless pedestrian was responsible, and that in 18.7 per cent, both parties were responsible.

At the 1924 meeting of the Hoover Conference on State and Highway Safety, the matter of compulsory automobile insurance was referred to the Insurance Committee for consideration as a means of reducing accidents. The committee rejected this proposal. The question was then brought up during the general meeting of the Conference. It was voted down almost unanimously.

Opponents of compulsory insurance also state that it will furnish victims no indemnity in cases where there are no witnesses, and in cases where the pedestrian is struck by a driver who makes an immediate getaway, and that under compulsory insurance injured pedestrians

will have to prosecute their claims as at present under the laws of negligence. The pedestrian would receive nothing if the motorist were not proven at fault.

In 1924, American people paid \$103,000,000 in premiums for automobile liability insurance. The enactment of compulsory automobile insurance would increase the annual premiums to over \$400,000,000.

Connecticut is the first and as yet the only State to place in operation a law designed to safeguard the financial interests of the victim of automobile accidents—and, incidentally, to reduce the number of automobile accidents by putting dangerous motorists off the road. On January first of last year, Connecticut's new "financial responsibility" act went into effect. Connecticut's experiment was designed by Motor Vehicle Commissioner Stoeckel to avoid the various pitfalls raised by the compulsory insurance proposals in other States.

The Connecticut law is based on the fact that a small minority of motorists causes the great majority of accidents. It protects the public from this small and dangerous minority.

Holders of motor-vehicle registration certificates who are convicted of reckless driving, including speeding, operating while drunk, or evading responsibility, or who cause the death of, or injury to, any person, or cause damage to property of at least \$100 will be required to produce evidence satisfactory to the Motor Vehicle Commissioner of ability to pay for damage up to \$11,000. Penalty for failure to furnish satisfactory evidence of financial responsibility will be loss of registration.

The law provides four different methods by which automobile owners may qualify as to financial responsibility.

The first method is by insurance. Blanks have been furnished to all insurance companies doing business in Connecticut upon which they certify to the department that an insurance policy covering the liability specified under the new law has been issued to the applicant for registration. The financial responsibility required is that it must be sufficient to satisfy any claim for damages by reason of personal injury to, or death of, any person, to at least \$10,000, and for property damage to the extent of \$1,000.

The second method is by filing a bond.

The third method is by depositing cash with the State Treasurer. He will issue a receipt for the deposit and may pay interest on it at a rate of not more than 5 per cent.

The fourth method is by depositing collateral with the State Treasurer. The Commissioner of Motor Vehicles is the determining authority of the State as to the amount and kind of collateral that will be accepted.

Applicants for registration started with clean slates when the law went into effect. Since that date, accidents and convictions have called forth evidence of financial responsibility. This guaranty against damage claims must be continued as long as the Motor Vehicle Commissioner sees fit, under penalty of refusal to renew registration. The guaranty cannot be withdrawn in less than three years, and then only if during that period of probation the registrant maintains a clean record. If a motorist from outside of Connecticut refuses to post a guaranty, the Commissioner may refuse him a right to operate an automobile in Connecticut.

Motor-vehicle accidents and convictions will bring before Commissioner Stoeckel for financial qualification each year about 15 per cent of Connecticut automobile

owners. Out of these, about one-half will be cases where no department decree follows. The other half, or from 15,000 to 17,500 persons, will be required to guarantee their financial responsibility.

There is no way of telling ahead as to who will be required to post a guaranty. No person will have to do so, except by his own act.

The satisfactory operation of the new act is made possible because Connecticut requires licenses of all operators and reporting to the Motor Vehicle Department of all automobile accidents. Connecticut also has an efficient State Police to help enforce it. Furthermore, the Motor Vehicle Department has for consultation the records of 80,000 operators which describe accidents and convictions during the last eight years.

The Connecticut law is aimed directly at the type of registrant who has had several accidents, and who is apt to have several more, but whose record has not been bad enough to cause the Commissioner to revoke his driving license. The one extreme—the man who has a clear record—need hardly be feared. The other extreme—the man with an extremely dangerous record—has already been put off the road.

Some people may feel that it is unjust discrimination to prohibit any person from owning and operating an automobile. Certain people are deprived of their liberty and placed in jails and prisons, and asylums because their acts have made them a menace to their fellows. No State is under an obligation to allow unfit persons to own and run automobiles any more than it is obliged to allow murderers, thieves, criminals in general and insane people to roam at large.

Connecticut's pioneer effort to solve the hazard of financial irresponsibility promises several interesting results.

Foremost will be that of providing the public with financial guarantees against the most dangerous type of motorist—the person whose record shows one or more serious violations of the motor-vehicle law. One aspect of this result will be to increase greatly the percentage of Connecticut motorists who are financially responsible.

Another effect of the law will be to gradually eliminate from the Connecticut highways those persons who seem bound to have accident—"repeaters"—thus tending to reduce the number of automobile accidents in the State.

The registrant will be held accountable for damage done by his car—even though he personally be far from the scene of the accident.

The Connecticut financial responsibility act, in confining its application to those who violate the motor-vehicle laws rather than applying to the careful and the reckless alike, avoids the basic objections of compulsory insurance. It is possible that this solution of the financial responsibility problem will commend itself to other States. If it does, its adoption by certain States would necessitate a sweeping change in their automobile laws. Certain States at present do not compel operators to secure licenses; they do not require a reporting of automobile accidents; they have no system of keeping the driving records of motorists; nor do they have a State Police to work with the Motor Vehicle Department in the enforcement of automobile laws—all of which Connecticut has. Those States which follow Connecticut's lead will find it necessary to amend their motor-vehicle laws in these respects.

Interesting innovations in methods of selling automobile insurance may also come about. The insurance companies are consulting the 80,000 records of the Motor Vehicle Department to determine the desirability of applicants for automobile insurance. In the near future, it is possible that before a Connecticut motorist can secure liability or property damage insurance, his official motoring record will be scrutinized by the companies. This plan would mark a departure in the present methods of accepting automobile liability insurance business.

Another innovation may also be in the offering. Having examined an applicant's driving record before issuing a policy, it would be a logical step to adopt the principle of grading the premiums, thus making the person with bad driving record—"the accident breeder"—pay a larger premium than the person with a clean record. This would make the cost of the insurance proportionate to the hazard involved. Such a system is already in use in selling life, health, fire, compensation, and other kinds of insurance. It is possible that the new law will result in the insurance companies grading their automobile liability premiums.

GOOD HIGHWAYS AND PROGRESS OF NATION

Good roads have not been given the credit due them as the advance agent of civilization and human progress. The church, the public school, the printing press, the home, all these have played a part, but have not improved methods of communication accomplished even more?

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Couldn't Shake Each Other

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"How on earth can I ask a deaf-and-dumb girl to dance?" he asked, a trifle anxiously.

"Just smile and bow to her," replied the doctor.

So the young man picked out a pretty girl and bowed and smiled, and she bowed and smiled, and away they danced.

They danced not only one dance that evening, but three, and he was on the point of asking her for another when a strange man approached his partner and said soulfully:

"I say, darling, when are we going to have another dance? It's almost an hour since I had one with you."

"I know, dear," answered the girl, "but I don't know how to get away from this deaf-and-dumb fellow!"—*Tid-Bits.*

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We seem to be unable, or unwilling, to grasp the necessities of the future. We too frequently build for the immediate present. This is particularly true in highway construction, due, perhaps, to the desire to build as many miles of improved roads as the funds available will permit, thus accommodating a larger volume of traffic. The impetus that has been given highway building had its origin in the development of motor traffic, but this form of transportation is of comparatively recent development and certainly has not reached the peak.

Generally speaking, highway engineers and road builders five and ten years ago were more or less handicapped because of lack of funds, and were forced to do the best they could with the means available. For instance, the State of Georgia appropriated for highway improvements the sum of \$15,000 in 1918. Today the revenues for highways in that State total more than eleven million dollars. Of course it was impossible to accomplish very much in the way of highway improvements with \$15,000. The road builders did the best they could with the funds available, and cannot be censured for their short-sightedness.

Five years ago a sixteen to eighteen-foot roadway was considered the last word in highway requirements. Today this width of roadway is a menace to the traveling public, and it seems that present traffic requires double this width in congested districts. Highways that might have been regarded as "boulevards" five years ago are not adequate for the traffic of today. We cannot build to meet future conditions of all times, because we are little better equipped now to judge of conditions ten years hence than we were five or ten years ago to foresee conditions of today.

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Three Bridges Completed in Madison County

R. C. Gibson of the Highway Bridge Department has recently made a final inspection of the three concrete bridges in Madison County comprising a contract given Meyer Greenwald Construction Company late in 1925. The new structures are as follows:

A bridge over Kings River about seven miles north of Kingston on Route 21, consisting of two 70-foot concrete arch spans, a 30-foot concrete girder span and earth approaches.

A bridge over War Eagle Creek 3 miles east of Huntsville on Route 68, consisting of two 70-foot concrete arch spans, two 30-foot concrete girder spans, and earth approaches.

A bridge over Glade Creek seven miles west of Huntsville on Route 68, consisting of four 30 and one 36-foot concrete girder spans and earth approaches.

These three bridges will provide in each instance a safe and comfortable stream crossing with a 16-foot clear roadway, well above high water, which is in

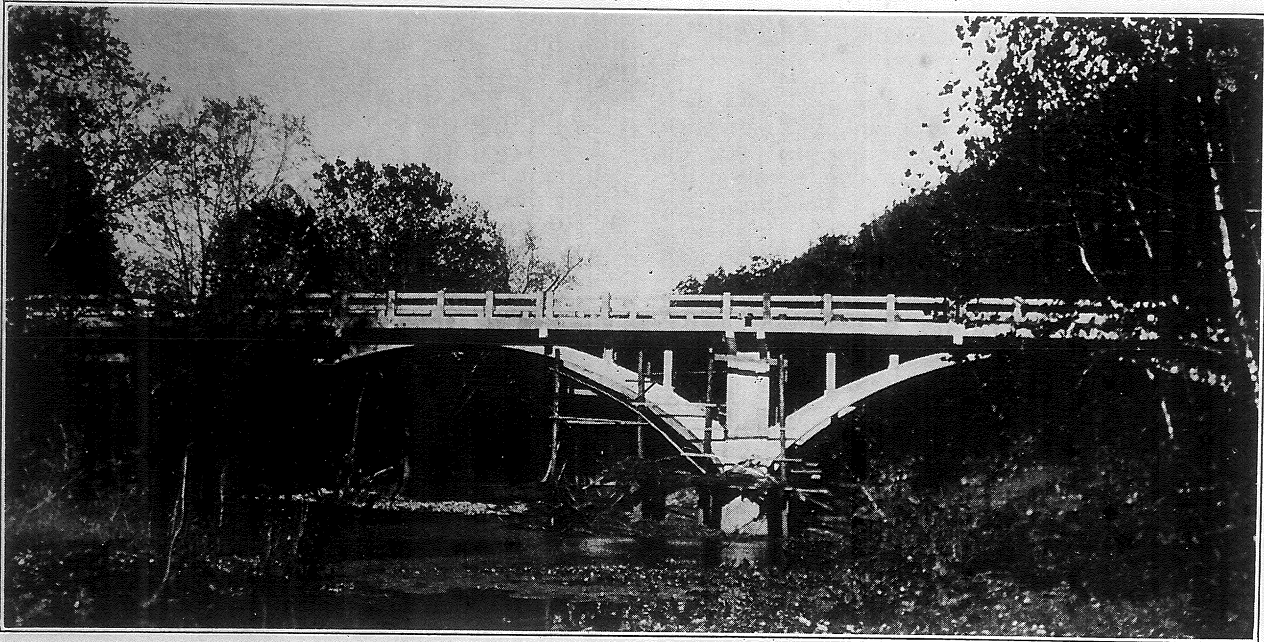
marked contrast to the at times dangerous if not impassable fords.

Upon the completion of two other bridges now under construction over Holman Creek (on Routes 68 and 23) the people of Madison County, and more especially those of Huntsville, which is 30 miles from the railroad, will have an outlet at all times. These improvements together with improved highways will doubtless usher in an unprecedented period of development for Madison County, which has lacked only good highways for transportation to become a leader in fruit production.

This bridge building program is being carried out by the State Highway Department with Walter C. Hicks as resident engineer.

In Days of Old

When Noah sailed the ocean blue
He had his troubles same as you;
For days and days he drove the ark
Before he found a place to park. —Azuride.



A view of the Concrete Arch Bridge just completed over War Eagle Creek on State Highway No. 68

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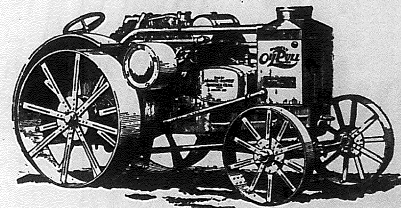
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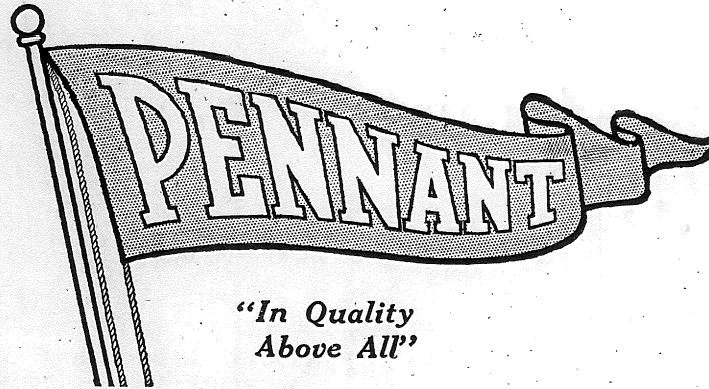
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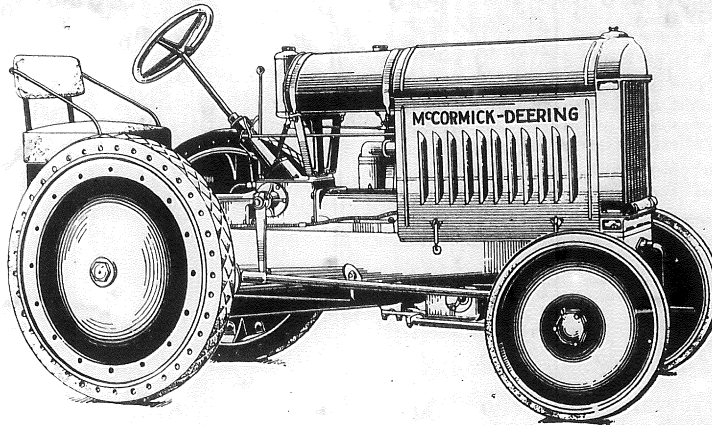
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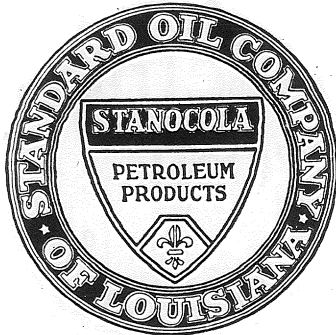
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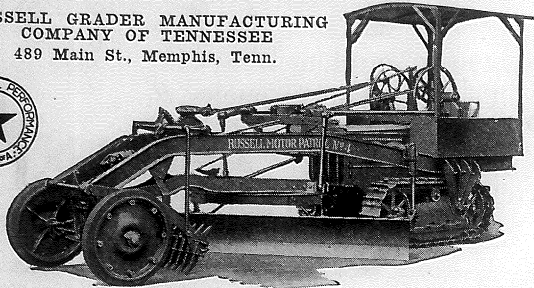
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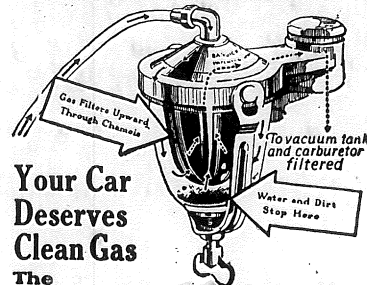
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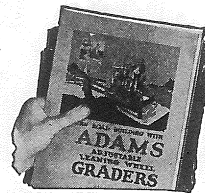
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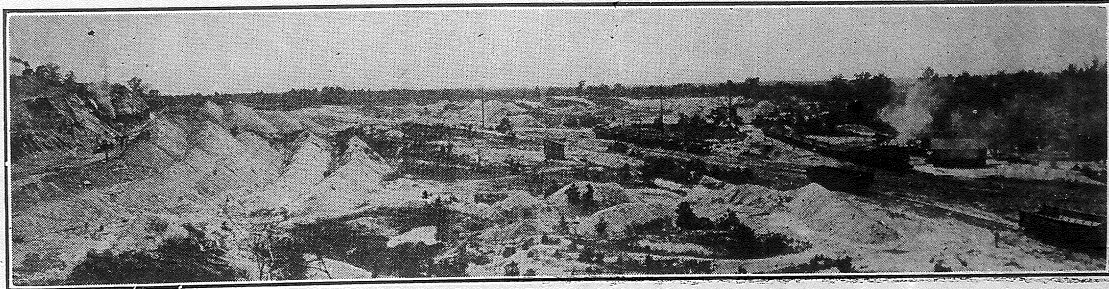
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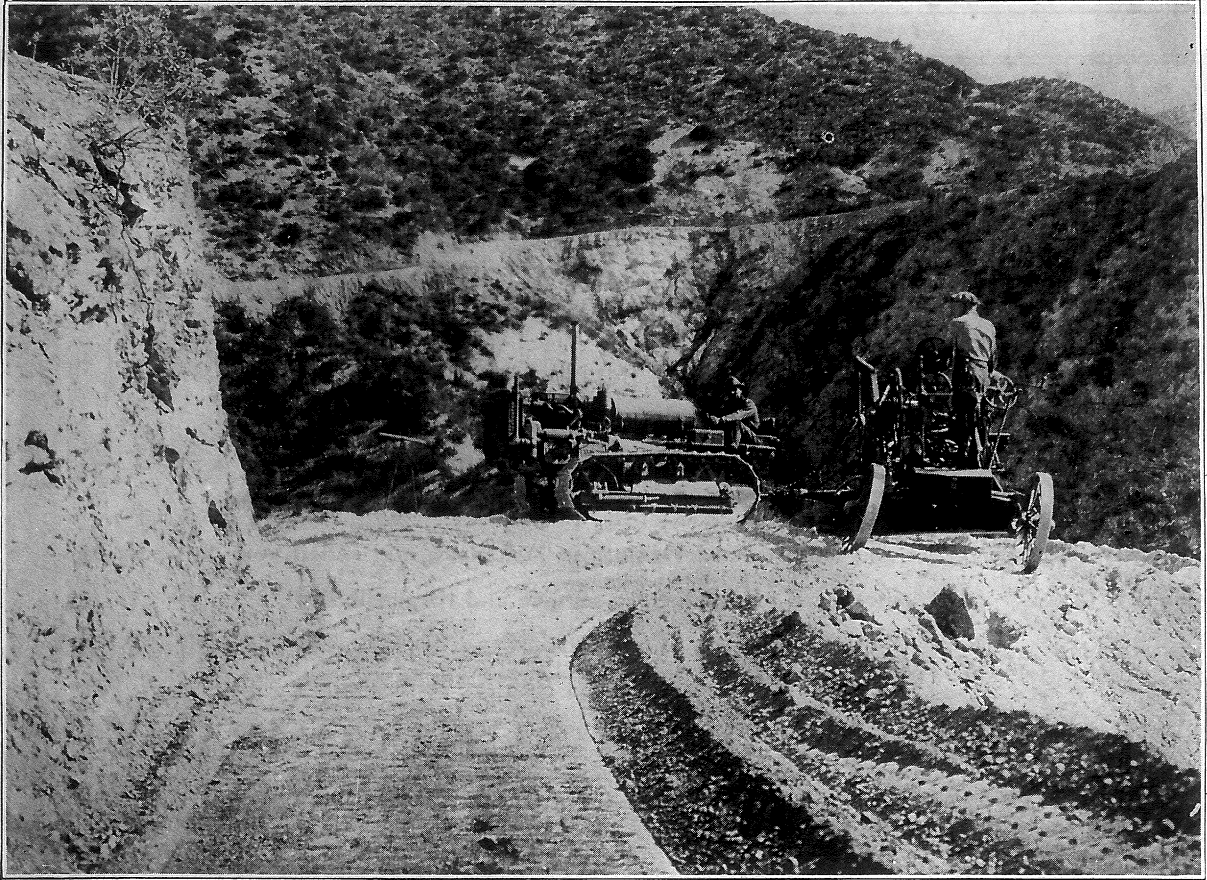
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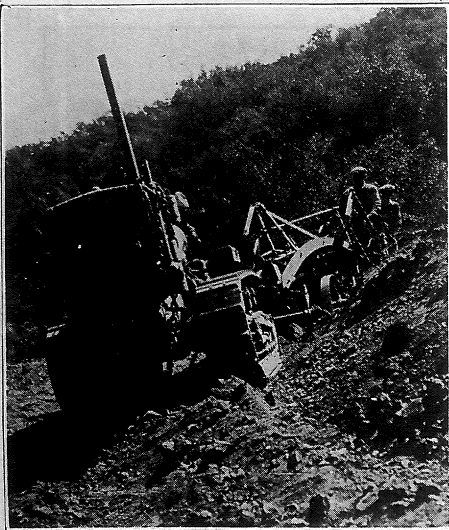
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